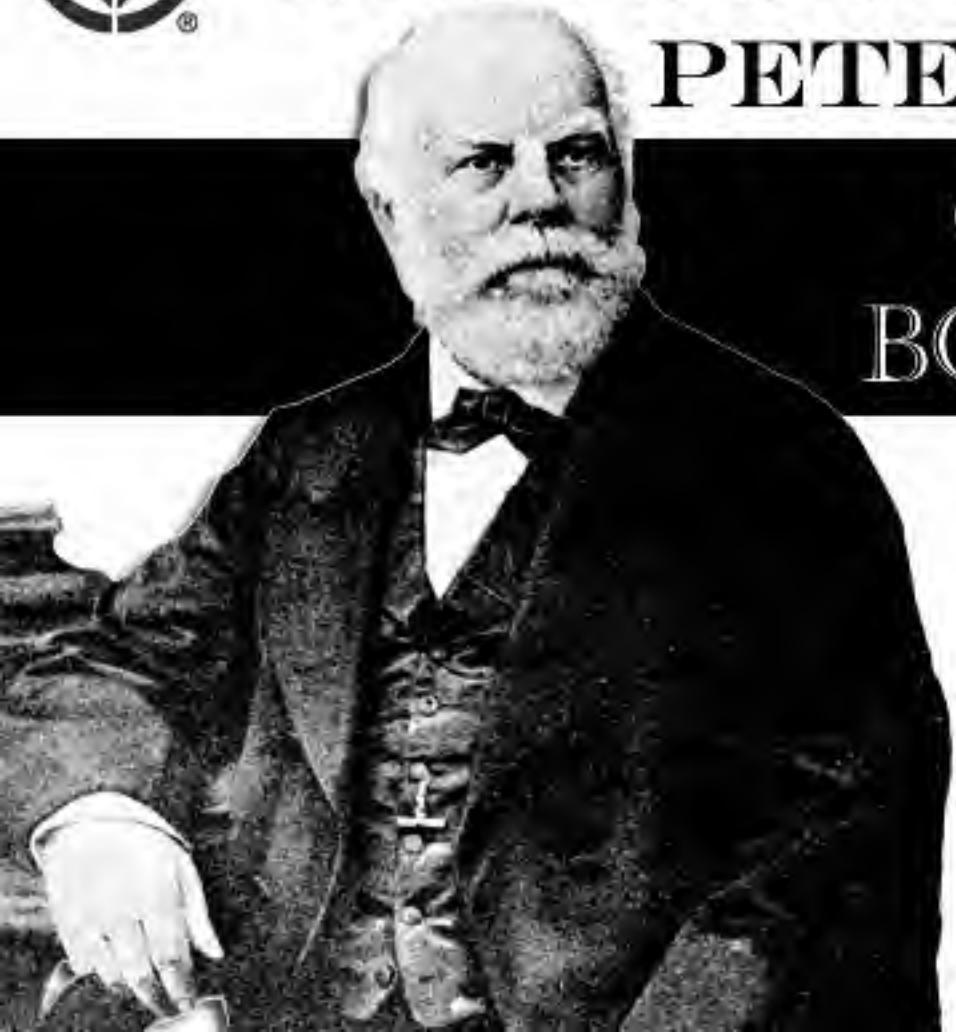




MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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Notes of the
Missouri Botanical

Club II. 9 p. 34

Sept 1871

61. Note from Dr. Engelmann.—I have now had Prof. Wood's specimen of *Opuntia* from Westchester Co., one from New Jersey sent by Mr. Meehan, and a third from New England, probably Massachusetts, furnished by Prof. Gray, side by side in cultivation with our Missouri and Illinois *O. Raftesquii*. It is certainly less spiny, and sometimes the flower is smaller than in our plant, but the deep green colour, the long spreading leaves, and the bright brown bristles, especially on the older joints, on which they increase in number and length to considerable bunches, are characteristic of the plant. With them I have growing the true *O. vulgaris* sent by Dr. Schott from the banks of the Potomac and probably not found north of Chesapeake Bay, with thicker light green joints, shorter, thicker, more adpressed leaves, and small bunches of short thin greenish yellow bristles. This is the plant which is cultivated in Europe under that name and has become naturalized in Northern Italy and which I have described and figured as such in Vol. 4, *Pacif. R. Reports*.



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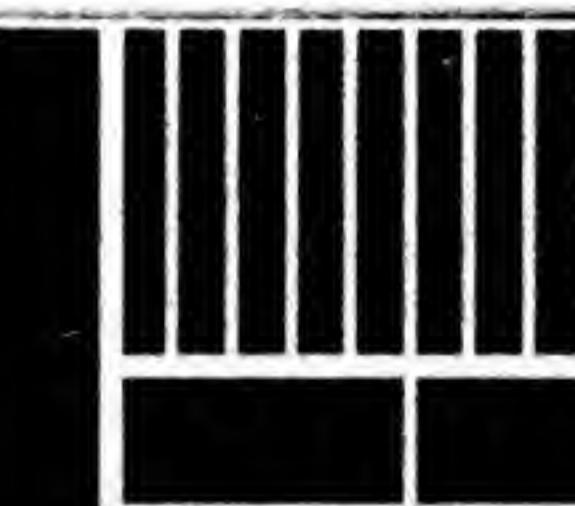
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The vasculum should be oval-cylindrical in shape, at least eighteen inches long, and with a door opening on one side. A small additional compartment opening at one end will be convenient as a lunch box, and also to contain water plants, nuts, acorns, land shells, or other objects of interest met with on the tramp. The portfolio should measure eighteen by twelve inches. It is best made simply of two stout sheets of pasteboard, not connected by a back or hinges, and covered with "enamelled cloth" to keep out moisture. To tie them together, I prefer a stout cord, or fishing-line, to india rubber bands or straps.

The young botanist soon learns that the collection of specimens does not consist in tearing off a flower with a portion of the stem and a few upper leaves. He finds it impossible to identify his species in many cases, without having both the sterile and fertile flowers when the plant is monœcious or diœcious, also the mature fruit, the root leaves, and even the root, all of which are component parts of the complete plant and often essential to its recognition.

In many cases the fruit may be obtained from young seedlings.

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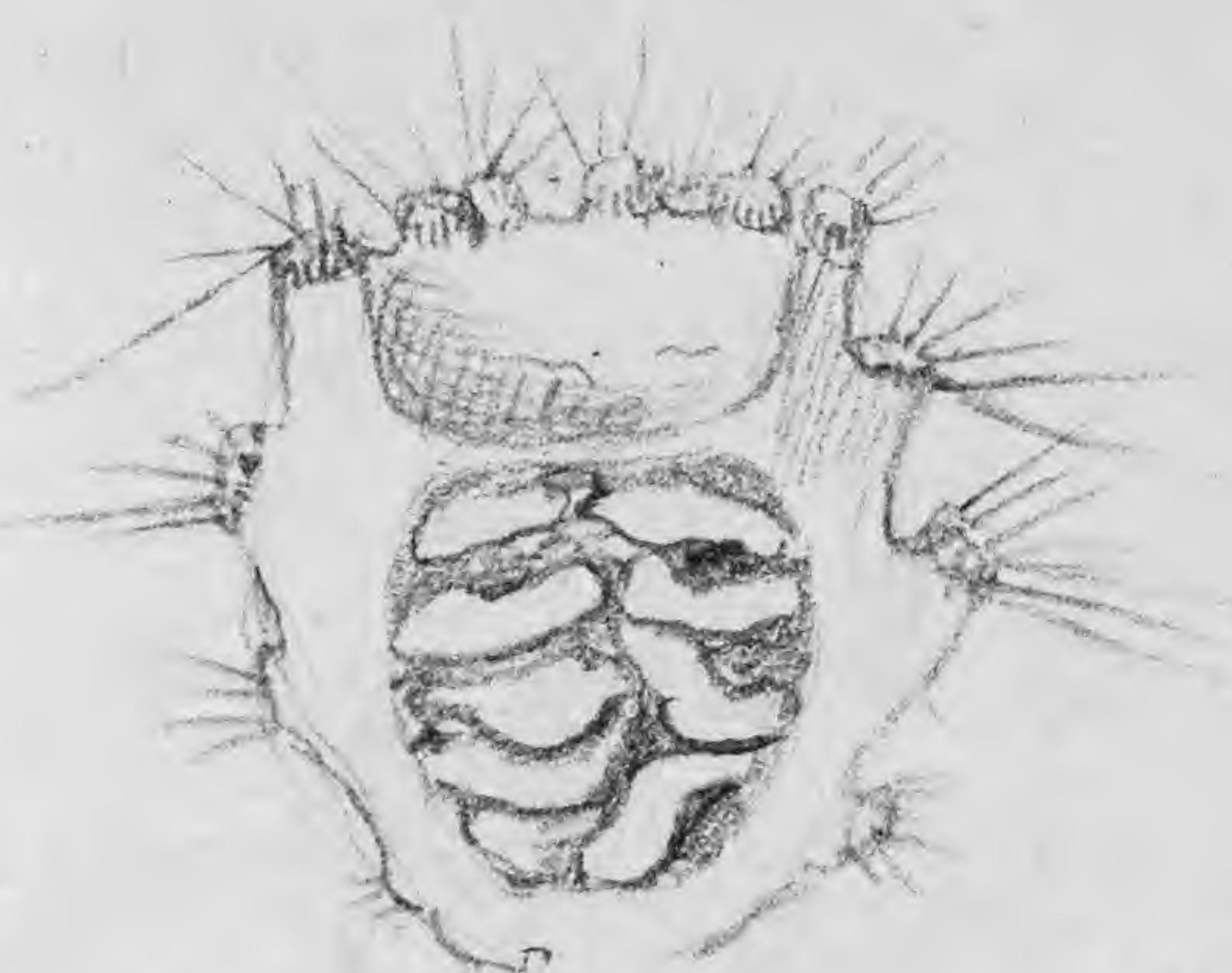
Opuntia missouriensis Colorado

July 1871. E. L. Greene.

berries green yet, oval, not quite 1 in. long,
contracted about the deep umbilicus
about 50 prominent puberilli, with compound white
tomentum, and white spines & bristly
puberilli and another $\frac{1}{18}$ arranged

7 & 11 spines most prominent
maturely $\frac{13}{2}$, seen

fleshy green walls of unripe
fruit shrivel up and dry at
maturity to a thin brittle shell



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Leitch & Corlies

DRUGGISTS

South West Corner Fifth and Market Streets.

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Hort Botan Rome Feb 6 1869

Opuntia spinosissima:

branches somewhat in one place
erect (trained, and in the greenhouse) stem cylindr. habit of the
plant that of *O. Brasilensis*, with linear, very long joints which
gradually become cylindr. stems and branches - other joints
shorter, oblong-linear; 2-3 plant 4-5 feet high
trunk about 3 inches diameter, covered with spines -
its areoles 1 inch apart, bearing 5-8 larger ($1-1\frac{1}{2}-2$ "')
and 10-15 shorter ($\frac{1}{2}-1$ ") acicular pale ashy spines
and long bristles -
joints very thin, linear oblong 2-3 inches wide
2-12-20 inches long -
yellowish acicular $\frac{3}{4}$ inches apart, oblong, with 3-5 and long
whitish spines 1-2 inches long and long yellow
bristles

Labour p. 452 " foliols très courts rouges



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Opuntia "ferox"

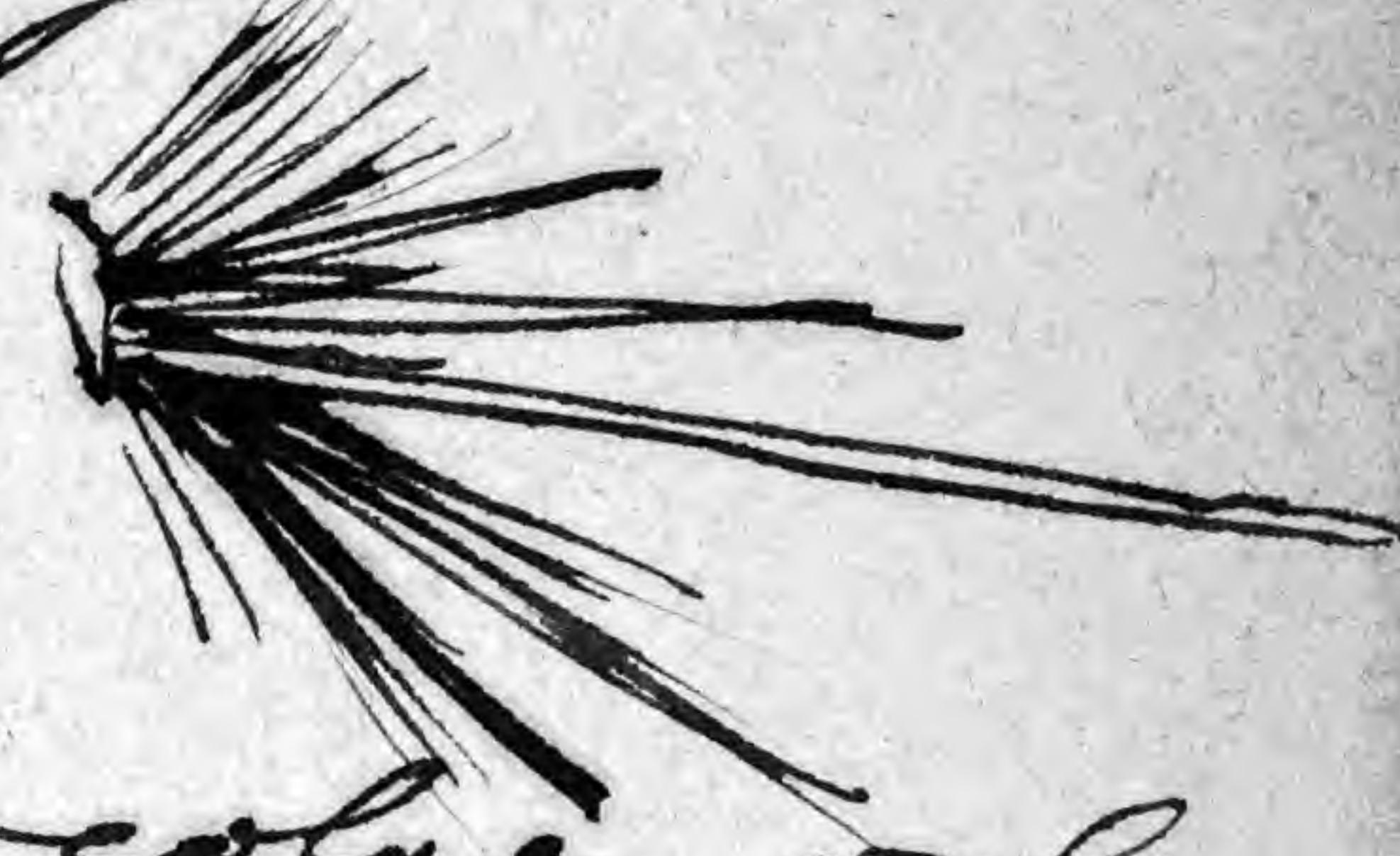
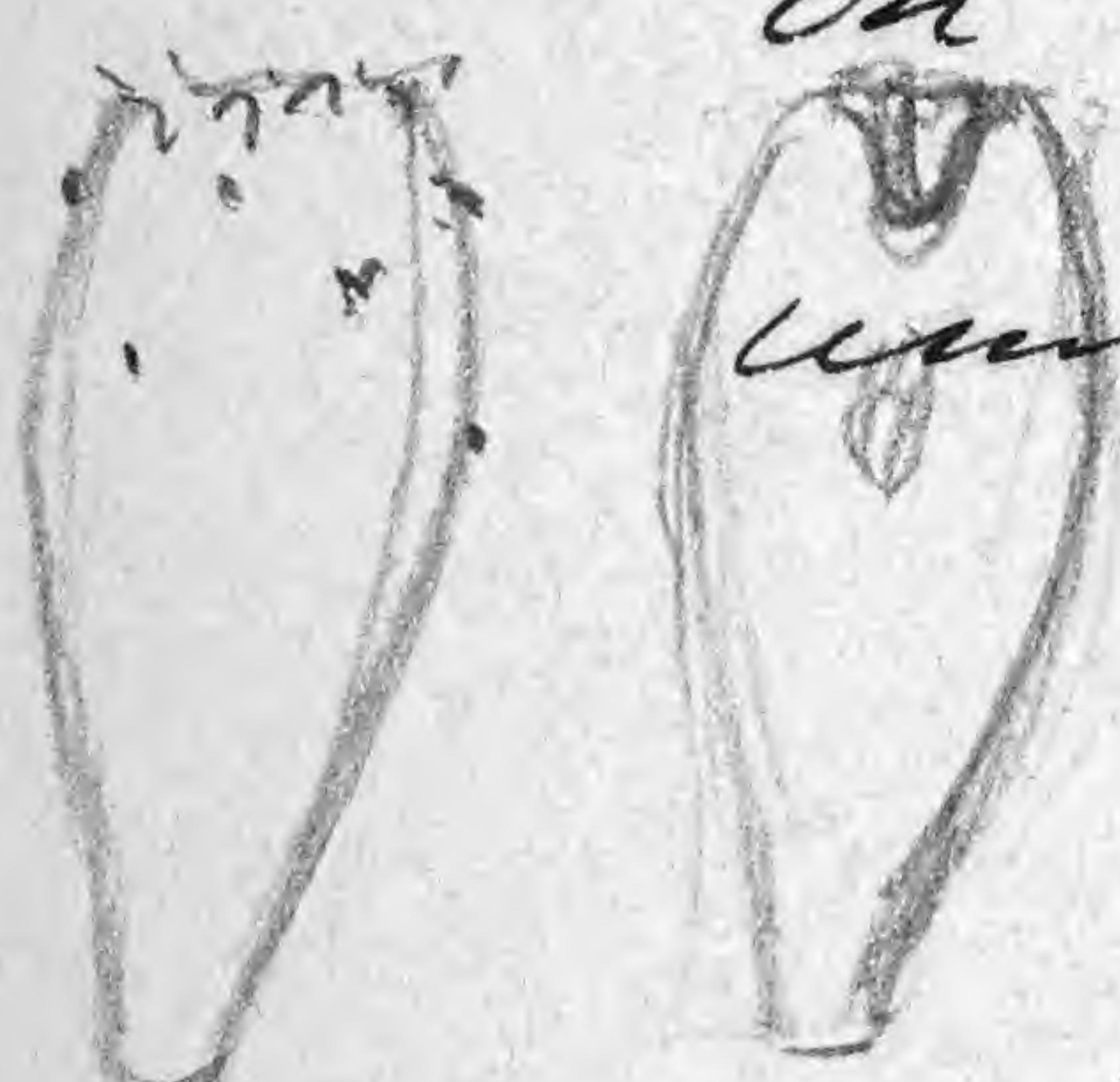
Villa Floridana, Vener,
Napoli

Dec-30 1868.

5 feet high, joints 3-4 inches long, 2" wide;
areolae all spiny, ~~covering~~ ~~bristly~~ -
spines 3-5, $\frac{1}{2}$ -1 inch long, yellow.

trunk $1\frac{1}{2}$ + 2 inches diameter, very spiny with old
areolae very large, beset with long
bristles and 6-7 stout & long spines.

berry (very unripe) small, with 13-15 areolae only
on upper part, small and bristly, $\frac{5}{13}$ order.
umbelliferous (now) very deep; 2 pits examined
sterile.



whole plant resembles much *O. polyacantha*.



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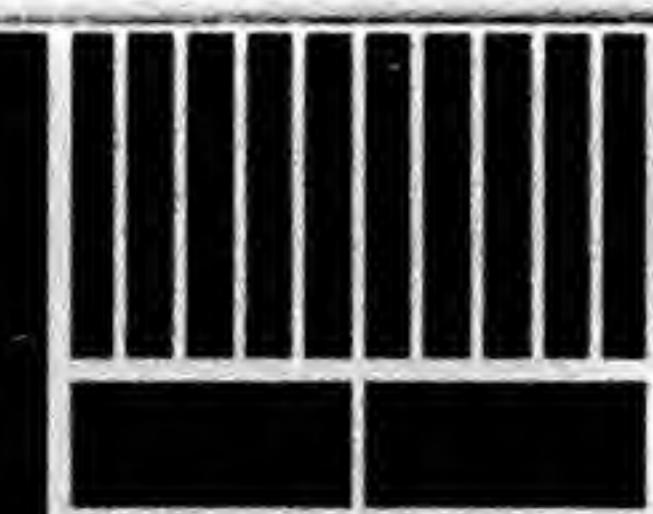
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"Opuntia nigra" is my O. monacantha
"O. cornifera" = O. lecootische.

Hort bot Roman.

Febr 6. 1869



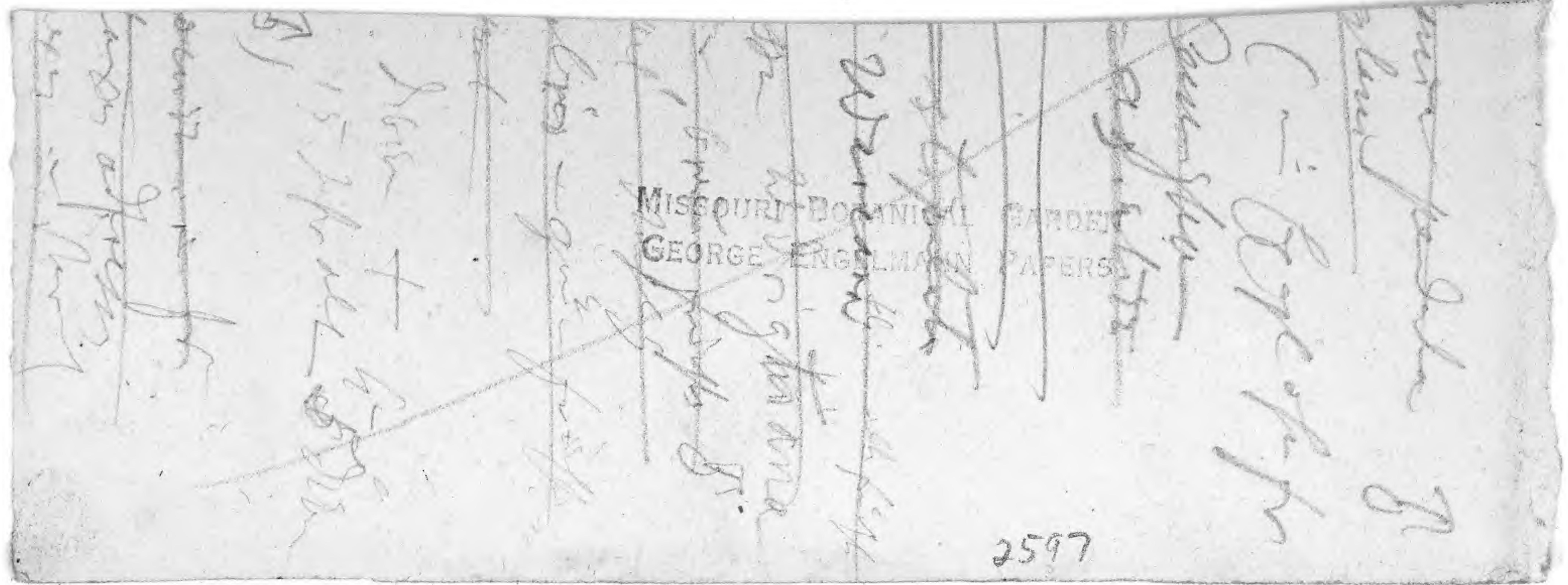
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"P. Angolae" "O. etaliana"

Hort. B. Map $\frac{13}{12}$ 1868
appear identical.

O. "tuberculata" with spines

"lanceolata" without spines

seen identical — and
both similar to O. Vulgaris,
only joint a little more elongate

H. A. Map $\frac{13}{12}$ 68



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